LIGHT HYDROCARBON SEPARATION USING 8-MEMBER RING ZEOLITES

ABSTRACT OF THE DISCLOSURE

The present invention is related to a method for kinetically separating a light hydrocarbon mixture comprising at least two components by preferentially adsorbing a first component on a zeolite adsorbent comprising 8-member rings of tetrahedra as the pore opening controlling hydrocarbon diffusion and alkali metal cations balancing a framework charge, wherein a second component is not preferentially adsorbed. The novel process comprises contacting the light hydrocarbon mixture with a zeolite adsorbent having a SiO_2/Al_2O_3 ratio greater than about 50 and less than 200 and further having a diffusion rate at least 50 times greater for the first component as compared to the second component, and then recovering at least one of the first component or the second component.